

## Effects of Traumatized Antenatal Mothers on Their Pre-School Children in Mt. Elgon Region, Kenya

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### Abstract

Foetus developmental vulnerability in pre-school children of traumatized antenatal mothers in Cheptais and Mount Elgon Sub-Counties, Bungoma County, Kenya is a study meant to establish the effects of trauma of the mother on the unborn child who was born and now is in pre-school level of education. Through observation by the mother through neonate, infant and childhood stages of developmental milestones in relation to the same observation of non-traumatized mothers, children. Their conclusion is supported by the observation of the same children by their teachers in pre-schools. The sampling strategy involved non-probability where purposive and snow-ball observation, analysis and probability, sampling where multistage or cluster was the most appropriate for observation and units of analysis to make units of representative sample of Cheptais and Mount Elgon sub-counties. Majority of the children born to traumatized mothers had developmental problems associated with disabilities as opposed to those mothers who resisted trauma; hence associating trauma with developmental problems.

**Keywords:** Trauma, Developmental Problems, Foetus, Pre-School Children, Mothers, special needs with disabilities.

### INTRODUCTION

Children are highly vulnerable if there is armed conflict and in security in the county, region, county or sub-counties. Incidents of land or ethnic clashes, political violence and cattle rustling in some areas have had direct and indirect impact to the lives of children, mothers and particularly expectant mothers. During the conflict, some mothers and girls are impregnated through rape. Some children and mothers affected by war and conflicts have to live in new environment away from home where basic necessities are seriously abused. The expectant mothers are not spared. They end up with traumatic stress which engulfs the mind of the victim hence mobilizing the body functionaries thus interfering with the development of the foetus in the womb whose effect may only be realized during the neonate, infant and early childhood periods. In this paper, most of the children born to traumatized mothers were found to have developmental problems associated with disabilities such as; hearing impairments, visual impairments, mentally handicapped etc. These impairments can occur at any stage of development (Conception, Zygote, Embryo, Foetus, neonate, infancy, baby and childhood) Sichari, 2014.

Traumatic experience respects no boundary depending on the course. The victims are human beings within the affected location. Disasters occur worldwide and the most vulnerable are the mothers and children. Gender based violence is one of the most widespread human rights abuse and public health and psychological problem in the world today, affecting as many as one third of the women in the affected areas of the world. It is also an extreme manifestation of gender inequality, targeting women and girls because of their subordinate social status in their communities (Lane, 2006). The consequences are always devastating and last a long time affecting women's and girl's physical health and mental wellbeing. At the same time its ripple effects compromise the social development of others including the unborn in the household, the family units, the communities where the individuals live and the society as a whole (Lou, 1994).

The last comprehensive study conducted on trauma in Kosovo were in 1999-2000 by US based Centre for Disease Control. In this survey, it was found that 17.1% of the Kosovo Albanians aged 15 and above showed symptoms consistent with post-traumatic stress disorder (PTSD). Survey in 2000 showed an increase to 25%, a result that could be consistent with the notion that the symptoms of PTSD could require months to emerge (Lopez, 2000). In a war situation, the victim's exhibit psychosomatic symptoms and anxiety which is associated with war trauma, social dysfunction and depression. This has a long-term effect on their mental functions, social wellbeing, physiological functions and the development of the foetus of the antenatal mothers (Yule, 2001).

Based on the following foregoing reference, trauma survivors can become angry and aggressive automatically if they feel they are in danger or frustrated as way of protecting themselves in the trauma situation. This can result in children abuse including the foetus, and family relations (Rashidi, 2005). Untreated trauma has significant consequences for the individuals, family, community and society which include domestic violence, secondary trauma of family members especially children and expectant mothers, depression, drug abuse, anti-social behaviour, crime etc.

Children have been victims and survivors of large and small-scale disasters from time immemorial. Therapists of all disciplines are used to helping children adjust after an individual trauma like death, accidents etc. but few have experience of managing trauma caused by a major disaster like civil wars, earthquakes, bomb

blasts etc. which make people much more aware of the effects of such disasters on victims, survivors and their relatives. According to (Lane, 2006), much less is known of the manifestations of posttraumatic stress reactions in children than adults. In part this is because of the difficulty in mounting studies in the immediate aftermath of a disaster; which is because, adults are understandably very protective towards children and more so the unborn who have survived a disaster, and at times adults are unwilling to acknowledge what children and the unborn may have suffered. They deny that children have major psychological outcome and that warrant investigation (Miller, 2005). Thus, there are very few systematic studies of the effects of major trauma on children and especially the unborn.

The Sabaot land clash was a self-fulfilling act that resulted into the community taking up arms in hope of reclaiming their land. In the process, they ruthlessly destroyed the social trends of the society by brutalizing the community where mothers and children were seriously affected leaving them highly traumatized. This is the very essence of this study in Mt. Elgon and Cheptais Districts.

Although the womb is fairly study protector of the growing embryo or foetus, some harmful influences can cross the placental barrier (Carol, 2000). These influences, which are particularly damaging during the embryonic stage, include x-ray or other radiation or toxic chemicals such as lead; can cause fatal abnormalities and deformities. The physical impact on the growing foetus may be determined by the environment in which the mother is living in. It can influence the child's growth positively or negatively (Hultman *et.al*, 2002). The rough traumatic environment is likely to impact on the growth of the foetus and the children negatively. This justifies that any happening to antenatal mother whether physical or emotional or mental is likely to affect the developing embryo and foetus.

Most of the pre-natal causes triangulates across all the disabilities. The peri-natal causes are associated with all impairments. The same applies to postnatal causes to all disabilities.

## MATERIALS AND METHODS

Cheptais and Mount Elgon Sub-Counties are among the sub-counties of Bungoma County. According to the former Bungoma District Strategic Plan 2005-2010 (GOK,2005), it lies at the Northern tip of Former Western Province and borders Teso sub-county in Busia County, Sebei and Mbale Districts of Uganda, Trans-Nzoia County, Bungoma West Central, Kimilili and North sub-counties. The sub-counties lies between latitude 0025.3° and 0053.2° North and longitude 340 21.4° and 350 04° East, It covers an area of 4.068 Km<sup>2</sup> which is 30 percent of the total area of the Bungoma County. An analysis of the population structure indicates a largely youthful population of about 75.2% between the ages of 0-26.

Bungoma County has a total of 591 pre-school units, 497 primary schools and 154 secondary schools. Dropout rates for primary schools are 53.1% for females, 57.45% for males while in secondary schools it reduces to 30% and 26.5% respectively. The pupil teacher ratio in pre-school is 1:28 in pre-school, 1:49 in primary and 1:35 in secondary schools.

The data for this paper were derived from a correlational study of descriptive in nature conducted in Cheptais and Mount Elgon sub-counties of Bungoma County from January 2013 to august 2013. 200 traumatized mothers and their children and 200 non-traumatized mothers and their children were identified through snowball sampling.

Qualitative interviews with pre-school teachers, stakeholders (Chiefs, KNUT Officials, Non-Governmental Organization and School Management Committee Members) were done through purposive sampling. The secondary data was obtained from the records of Maternal Child Health (MCH) departments of Cheptais District Hospital and Kapsokwony District Hospital during 2007-2008 periods. Like many psychological researchers interested in the post traumatic stress disorder in children and their mothers, endeavoured to be closer to them to capture or true picture of them through observation. During the interview, I deliberately in line with Prout, (2002) view, approached the children and their mothers and treated them as the main informants and commentators on their own lives. A qualitative content analysis was performed during and after the fieldwork period, by coding and computing the interview data with each other and with observational data and by asking analytical questions (Glaser and Strauss, 1997/1999). The analysis resulted in a set of behavioural disorders and impairments among children born to traumatized mothers and very few cases of the same from non-traumatized mothers.

## RESULTS AND DISCUSSION

The study aimed at establishing the effect of trauma on unborn children. It covered relationship between displacement and growth of those pre-school children who were born between 2007-2008 to traumatized and non-traumatized mothers. Behaviour experienced by the same pre-school children, traumatizing agents, the experience of trauma victim and disabilities related to traumatized antenatal mothers.

### State of growth of children born during 2007- 2008 crisis

Respondents were asked to indicate how the growth of children born during 2007-2008 had been. The responses

are given in Figure 1.3

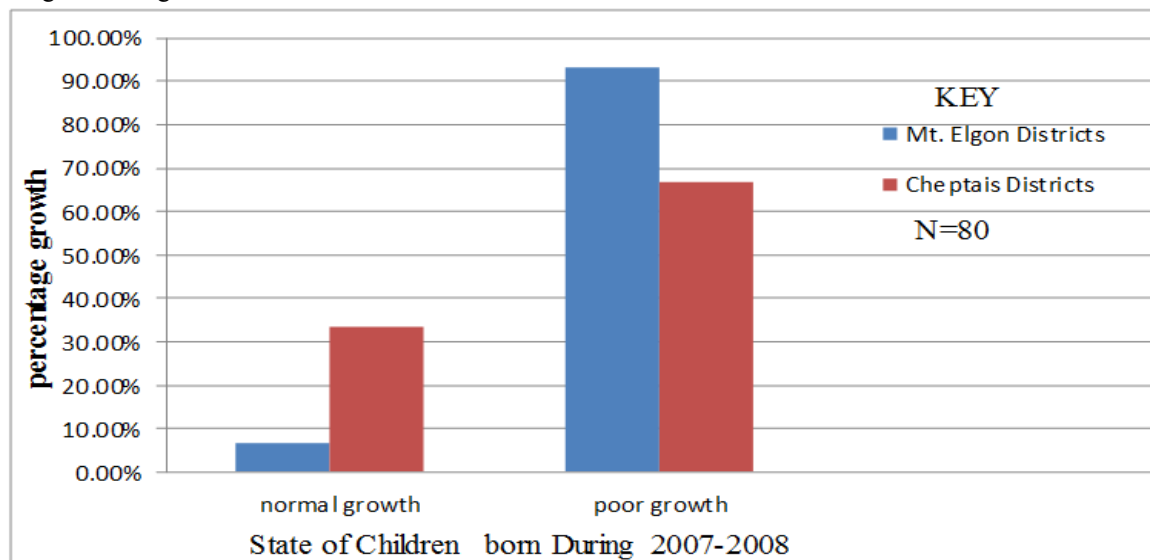


Figure 1.3: Growth of children born between 2007 and 2008 in Cheptais and Mt. Elgon Districts, Bungoma County, Kenya

A Chi Square test of independence conducted on the results of respondents indicated that there was highly significant ( $p < 0.01$ ) relationship between district and growth of children born between 2007-2008 ( $\chi^2_{1,0.01} = 18.00$ ). The results indicate that the growth of majority of children born between 2007 and 2008 was poor. In Mt Elgon, 6.7% had normal growth while 93.3% had poor growth. For Cheptais district, 33.3% had poor growth while 66.7% had a normal growth. These results are consistent with those of Hansen *et. al* (2000) who established that women who experienced severe life events in the first trimester of pregnancy had a 50% increase in the rate of congenital abnormalities such as in cranial neural crest derived organs such as cleft palate. Even greater risk was associated with the most severe stress, like unexpected death of a child. Hedegaard *et. al* (1993) and Lou *et. al* (1994) justify that pre- term labour and low birth weight for gestational age are the outcomes linked most consistently with antenatal stress or anxiety in human beings. The FGD group meetings revealed through the mothers of the children in attendance that their children's growth was different from the other siblings. Most of the children had behavioural shortcomings. The local community interviewed had the same view of the children born between 2007 and 2008 period of the civil strife. The records from the hospitals visited justified that there were mothers who were traumatized and expectant that attended the maternal care clinics in 2007-2008 period. The children observed whose mothers were traumatized had growth problems.

#### Relationships between displacement and growth of children born after 2008

Figure 1.4 Establishes the relationship between displacement of mothers and growth of the children born after 2008. There were higher poor developmental milestones in the Mt. Elgon and Cheptais Districts.

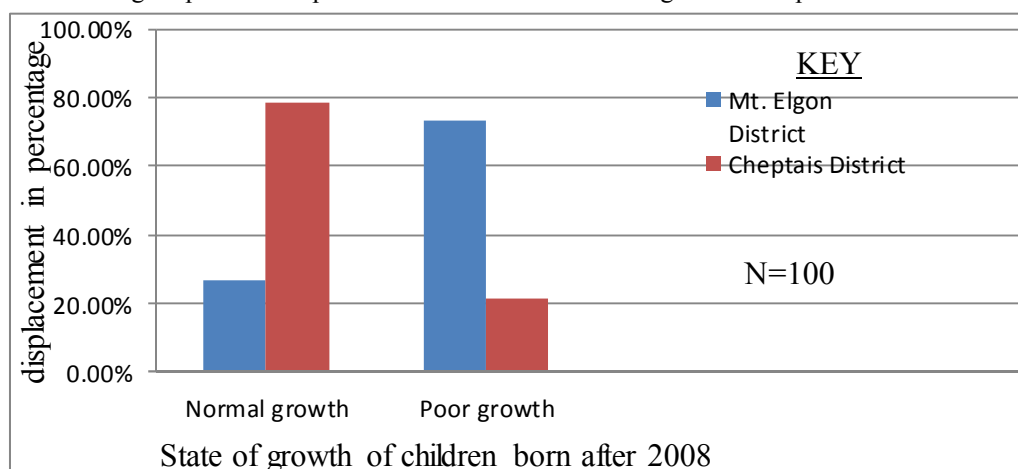


Figure 1.4: Relationship between displacement and growth of children born to traumatized mothers after 2008 in Cheptais and Mt. Elgon Districts of Bungoma County.

A Chi-Square test of independence conducted on the responses of the respondents indicated that there was significant ( $p < 0.05$ ) relationship between displacement and growth of children born to traumatized mothers

after 2008 ( $\chi^2_{1,0.05}=4.03$ ). The results indicate that the growth of majority of children born after 2008 was poor with several delayed developmental milestones. In Mt. Elgon District, 26.9% had normal growth while 73.1% had poor growth. For Cheptais district 78.3% had poor growth while 21.7% had normal growth. This implies that the conflicts had a negative impact to children who were foetus during and immediately after the conflict Period. The results from the secondary data also supports the findings. Most women who attended medical clinics had suffered from physical body injuries and mental torture. This is also confirmed by the behaviour displayed by children of the mother's who had attended the clinics in hospitals. The group discussion meetings confirms the existence of children with developmental problems who were born immediately after 2008. Most of them were conceived between 2007 and 2008 through rape. The observation of the same children and their mothers reveals families that appear to be unsettled in the minds hence leading a confused kind of life style of not caring of the natural demands. The mothers of the pre-school learners interviewed also agreed that during the time they were expecting the children they were undergoing a lot of psychological torture emanating from the experiences they went through during 2007-2008 SLDF atrocities. Oconner *et.al* (2000); concurs with the findings by suggesting that self reported antenatal anxiety at 32 weeks gestation leads to severe behavioural / emotional problems in late gestation can lead to hyperactivity and attention deficit disorder in the baby. The findings confirm the relationship of the mothers' trauma and their children's emotional and behavioural disorders and the visible disabilities (Sichari, 2014)

#### **Behaviour displayed by children born during and after the conflict period**

The study sought to establish the behaviour of children born during and after the conflict period. Traumatized and non-traumatized antenatal mothers were asked to give the behaviour displayed by children born after the conflict period. The results are summarized in Table 1.4

**Table 1.4: Summary of behaviours displayed by children born to traumatized mothers**

Behaviour	Most displayed	Displayed	Least Displayed	Not displayed	Chi Square Test
Happiness	0 (0.0%)	0 (0.0%)	58 (60.4%)	38 (39.6%)	$\chi^2_{3,0.05}=4.167^*$
Friendly	0 (0.0%)	10 (10.4%)	27 (28.1%)	59 (61.5%)	$\chi^2_{3,0.05}=38.688^{**}$
Shyness	20 (20.8%)	76 (79.2%)	0 (0.0%)	0 (0.0%)	$\chi^2_{3,0.05}=32.667^{**}$
Sadness	47 (49.0%)	49 (51.0%)	0 (0.0%)	0 (0.0%)	$\chi^2_{3,0.05}=9.42^{**}$
Angry	58 (60.4%)	28 (29.2%)	10 (10.4%)	0 (0.0%)	$\chi^2_{2,0.05}=36.75^{**}$
Surprised	0 (0.0%)	57 (59.4%)	39 (40.6%)	0 (0.0%)	$\chi^2_{3,0.01}=98.80^{**}$
Anxiety	19 (19.8%)	58 (60.4%)	9 (9.4%)	10 (10.4%)	$\chi^2_{3,0.05}=66.750^{**}$
Temper tantrum	9 (9.4%)	58 (60.4%)	19 (19.8%)	10 (10.4%)	$\chi^2_{3,0.05}=66.750^{**}$
Depression	77 (80.2%)	9 (9.4%)	0 (0.0%)	10 (10.4%)	$\chi^2_{3,0.05}=94.938^{**}$
Low self esteem	38 (39.6%)	38 (39.6%)	20 (20.8%)		$\chi^2_{2,0.05}=6.750^*$
Irritability	0 (0.0%)	48 (50.0%)	28 (29.2%)	20 (20.8%)	$\chi^2_{3,0.05}=13.000^{**}$
Forgetful	0 (0.0%)	96 (100.0%)	0 (0.0%)	0 (0.0%)	$\chi^2_{3,0.05}=288.00^{**}$
Withdrawal	87 (90.6%)	9 (9.4%)	0 (0.0%)	0 (0.0%)	$\chi^2_{3,0.05}=63.375^{**}$
Aggressive	0 (0.0%)	29 (30.2%)	38 (39.6%)	29 (30.2%)	$\chi^2_{2,0.05}=1.668^*$
Cruelty	0 (0.0%)	39 (40.6%)	48 (50.0%)	9 (9.4%)	$\chi^2_{3,0.05}=26.063^{**}$

\*Significant variation at  $p=0.05$       \*\*Highly significant variation at  $p=0.01$

The results indicate that the behaviours commonly displayed by children, conceived during the conflict period by the traumatized mothers, were: shyness, sadness, anger, low self esteem, forgetfulness and withdrawal. Those rarely displayed were happiness and friendliness. These behaviours are likely to have originated from the problems their mother went through during the traumatizing episodes. This is justified by Tables 1.3 and 1.4 which concur on the findings. In both tables happiness and friendliness were passive. The children observed also exhibited the same behaviours as the tables indicate. This is supported by Corale (2000) who argues that you should keep in mind that today no one argues in terms of nature and nurture; all scientists understand that hereditary and environment factors interact to shape the life of a foetus.

This study of foetus development is dependent on the mother, people around her, hereditary factors and the general environment. The observed behaviour of children of traumatized mothers and non-traumatized mother gives a clear evidence of what the environment can do to a foetus. The medical records from Mt. Elgon District indicate there were fewer expectant mothers who attended maternal child health care clinics in comparison to Cheptais District where medical records reveals several mothers attended the clinics as well as treatment for physical injury inflicted to their bodies hence in a traumatic condition. The same evidence is seen in focus group discussion meetings where several victims attended from Cheptais District as opposed to Mt. Elgon where few members of the groups attended. The observation of the children of traumatized mothers revealed behavioural problems like hyperactivity, emotional behavioural disorders etc. The pre-school teachers also confirmed the behavioural deficits of the children identified with trauma during gestation period.

#### **Experience of pre-school teachers on behavior of their pupils**

Pre-school teachers were also asked to indicate against the behavior the number of boys and girls in their schools

that displayed different behaviours. The results are summarized in Table 1.5

**Table 1.5: Rate at which pre-school children displayed different behaviours of children in Cheptais, Mt. Elgon Region, Bungoma County, Kenya**

Behavioural signs	Fairly displayed	Displayed	Most displayed	Not displayed	Chi Square Test
Happy	1049(40.2%)	756 (30.0%)	730 (28.0%)	72 (2.8%)	$\chi^2_{3,0.01}=84.37^{**}$
Sad	390 (32.6%)	292 (24.4%)	348 (29.0%)	168 (14.0%)	$\chi^2_{3,0.01}=98.96^{**}$
Angry	452 (28.9%)	416 (26.6%)	413 (26.4%)	284 (18.1%)	$\chi^2_{3,0.01}=8.16^{**}$
Scared	280 (31.1%)	228 (25.3%)	312 (34.7%)	80 (8.9%)	$\chi^2_{3,0.01}=2.69^{**}$
Anxiety	86 (18.5%)	75 (16.1%)	60 (12.9%)	244 (52.5%)	$\chi^2_{3,0.01}=40.96^{**}$
Depressed	415 (28.9%)	424 (29.5%)	322 (22.4%)	276 (19.2%)	$\chi^2_{3,0.01}=3.03^*$
Irritability	60 (27.0%)	54 (24.3%)	95 (42.8%)	13 (5.9%)	$\chi^2_{3,0.01}=1.80^{**}$
Withdrawal	671 (37.1%)	550 (30.4%)	513 (28.4%)	73 (4.0%)	$\chi^2_{3,0.01}=25.13^{**}$
Aggressive	297 (27.3%)	408 (37.6%)	179 (16.5%)	202 (18.6%)	$\chi^2_{3,0.01}=11.09^*$
Temper tantrum	138 (32.2%)	132 (30.8%)	132 (30.8%)	26 (6.1%)	$\chi^2_{3,0.01}=19.05^*$
Hyperactive	75 (11.2%)	168 (25.1%)	241 (36.0%)	185 (27.7%)	$\chi^2_{3,0.01}=12.75^*$
Hypoactive	90 (32.6%)	98 (35.5%)	30 (10.9%)	28 (10.1%)	$\chi^2_{3,0.01}=23.55^{**}$
Mood swings	99 (34.6%)	43 (15.0%)	104 (36.4%)	40 (14.0%)	$\chi^2_{3,0.01}=17.72^{**}$

\*Significant at  $P=0.03$

\*\*Highly significant at  $P=0.01$

The majority of children born during and after the conflicts displayed sadness, temper tantrum hypoactive, anxiety, withdrawal, aggressiveness. Evans, *et. al* (2001) notes that it is increasingly apparent that antenatal maternal mood can have lasting effect on the psychological development of a child. Frequently, postnatal depression is preceded by antenatal depression as well as antenatal anxiety. It could be possible that some of the effects on the child attributed to postnatal depression may be derived instead from antenatal mood. It could be also possible that early stress exposure increases the risk for child's emotional behavioural disturbances associated with depression leading to trauma episodes (Wade & Tavis, 2000).

This review is very much relevant with the study. For it has outlined how a stressed expectant mother can expect a child with deviant developmental trends. This therefore, suggests that when an expectant mother is traumatized, the foetus is likely to be influenced by the same; as the case of Sabao and Ndorobo traumatized women during the civil war of 2006-2008. Miller (2005) confirms this when he cites the influence of alcohol on the foetus. The observation of pre-school learners showed a very big difference in the way the children from traumatized mothers behaved in relation to those from non-traumatized mothers. This is confirmed by the attendance of the meetings for group discussions whose majority was traumatized mothers. The children of the mothers who attended medical clinics in 2007 -2008 were also seen to have social and behavioural problems. Evans *et.al* (2001); confirms this by saying that it is increasingly apparent that antenatal maternal mood can have lasting effect on the psychological development of a child.

#### Traumatizing agents

Respondents were asked to indicate whether they had witnessed any traumatizing agents. All of them (100%) indicated that they had witnessed some traumatizing agent. They were further asked to indicate the traumatizing agents they had witnessed. The results are summarized in Table 1.6.

**Table 1.6: Traumatizing agents of the conflict in Cheptais and Mt. Elgon Districts Bungoma County, Kenya**

Events	Mt. Elgon District	Rank1	Cheptais District	Rank 2
Family displacement	102 (53.1 %)	1	97 (50.5%)	1
Disablement of body parts	44 (22.9%)	2	32 (16.7%)	3
Rape	31 (16.1%)	3	49 (25.5%)	2
Death	15 (7.8%)	4	14 (7.3%)	4
<b>TOTAL</b>	<b>192 (100.0%)</b>		<b>192 (100.0%)</b>	

Spearman's rank order correlations were calculated between the ranks to establish similarities or differences in the rankings. The value of  $r$  was  $r=0.80\pm0.18$  which is significant ( $p<0.05$ ) showing that the two rankings were similar.

Table 1.6 displays the ranking of traumatizing agents where family displacement was rank number one in both Cheptais and Mt. Elgon Districts at 53.1% and 50.5% respectively. In Mt. Elgon disablement of body parts was ranked at 22.9%, rape was ranked number 3 at 16.1% and death was ranked number 2 at 25.5%, disablement was ranked number 3 at 16.7% and death was ranked number 4 at 7.3%. The revelation here is that most traumas can be initiated by any interference with the natural needs of a human being; which engages the brain leaving it to function in disorderly manner considered abnormal in comparison to natural requirement of nature and nurture.



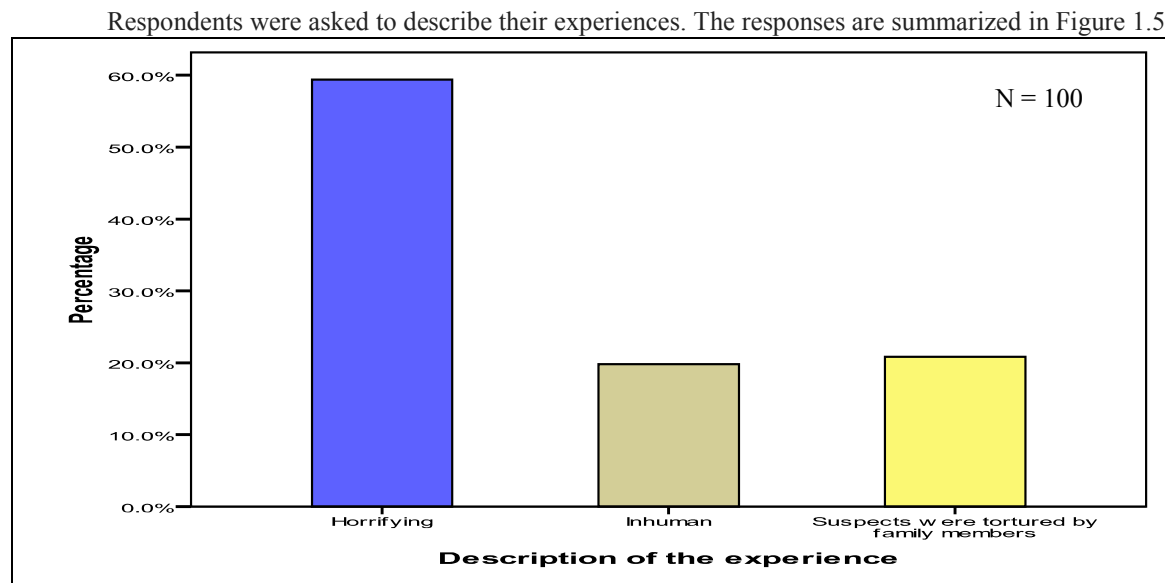


Figure 1.5: Description of experiences following the conflict in Cheptais, Mt. Elgon Region, Bungoma County, Kenya.

A Chi Square test of variation conducted on the responses indicated that there was a highly significant ( $p < 0.01$ ) variation in the responses ( $\chi^2_{1, 0.01} = 30.62$ ). From the results, 59.4% of respondents indicated that the experience was horrible, 19.8% indicated that it was inhuman while 20.8% indicated that it was a torture to them. The revelation from Table 6.3 is that most mothers were traumatized by the manner in which they were removed in their homes and villages and the horrible experiences they went through in the process and their new homes. This was closely followed by the way the people's ears, hands, fingers, legs and private parts were cut or removed and the pain the victims who were close relatives went through. Then as if the punishment was not painful enough, the mothers who were forced to watch what was happening were eventually turned into painful rape lasting as long as two hours continuously (Ngobilo, 2013). They were left unconscious. When they recovered after some months, they were expectant of the children who are now in pre-schools in Mt. Elgon region of Bungoma County. This further evidenced by the experience narrated by Eunice Cheptarus from the local community during Focus Group Discussion (FGD) meeting in Cheptais District.

It was established from the study that many residents of Mt. Elgon and Cheptais District were real victims of trauma as evidenced by the following experience of one of the victims. The case of a traumatized mother from Mt. Elgon who witnessed and ended up being a victim of the clash clearly illustrates the kind of trauma that most residents experienced. She experienced the violence on 28<sup>th</sup> February 2007 at Chepyuk Village. Eunice Cheptarus (not real name), aged 41 years old describes her experience during the conflict:

*"I remember very well it was at midnight. I heard some footsteps outside our house. My husband had just arrived from Chepyuk market. I asked my husband what might be happening outside. Suddenly there was a knock on our door and a demand for the door to be opened. My husband asked them, who are you? In a flash of a second, six men well armed with guns were already in the house, demanding to know the whereabouts of my husband; who had already taken cover in a cupboard. They started to search for him everywhere in the house. One of them opened a cupboard and pulled him out. My husband was dragged from his hide out.*

*In the process I managed to run out of the house for my safety. Unfortunately I bumped into two men at the gate. One of them shouted, finish her. However, I managed to escape into the bush not to be seen by them as they concentrated on my husband. Our children screamed but nobody came to our rescue perhaps because of fear. In the bush, I heard my husband pleading with the gang to spare his life; but instead the gang leader ordered for his death. As if it was a dream in the bush, I heard a loud bang and a scream; I fall down unconsciously only to wake up later and learnt that the loud bang was the bullet that finished my beloved husband. At the time, I was three months expectant. I am widowed with six children to take care."*

This was a true story, which was narrated during the focus group discussion (FGD) at Chepyuk Market in Cheptais District of Mount Elgon Region Bungoma County. It reveals the intensity of authorities to follow human being and the vulnerability of females in the society. Obiri (2011) justifies the same by quoting a victim saying "one man raped me and then the second one and the third man until I become unconscious".

### Traumatized Antenatal Related Disabilities

The study sought to establish the proportion of pupils with different disabilities in pre-schools within the study area whose mothers were traumatised. The results are summarized in Table 1.7

**Table 1.7: Proportion of pupils with different disabilities in pre-schools in Cheptais and Mt. Elgon districts, Bungoma county, Kenya**

Disability	Frequency	Percentage (%)
Learning difficulty	132	33.0
Mental handicap	95	23.8
Physical handicap/ neurological impairment	50	12.5
Visual impairment	37	9.1
Hearing impairment	36	9.0
Cerebral Palsy	25	6.3
Epilepsy	19	4.8
Deaf/ blind	06	1.5
<b>TOTAL</b>	<b>400</b>	<b>100</b>

Table 1.7: Proportion of pupils with different disabilities in pre-schools in Cheptais and Mt. Elgon districts, Bungoma county, Kenya

A Chi-Square test of variation conducted on the responses indicated that there was a highly significant ( $p < 0.01$ ) variation in the results ( $\chi^2_{7,0.01} = 63.13$ ). It can be noted from the results that the most common disabilities that affected children born during and after (2007-2008) the conflict period, in order of descending magnitude were learning difficulty, mental handicap, physical handicap, visual impairment and hearing impairment. The observable conditions like physical handicap, visual impairment, cerebral palsy, mental handicapped were noted among pre-school learners. The majority of them of them were from Cheptais.

The existence of these children with disabilities was approved by the FGD meetings where they were associated with the most affected mothers in Mt. Elgon region of Bungoma County. Pre-school teachers were, therefore, asked to indicate the children in their classes who had different disabilities. The responses were given based on a four-point Likert scale (Severe, Moderate, Profound and Mild). The findings relates trauma to conditioning associated with brain functioning hence pointing to learning difficulties, mental retardation and neurological impairments with high frequency. The results also reveals that trauma may not be associated with the sensory impairments hence the low frequency of visually impaired, hearing impaired and Deaf/blindness.

According to Sinclair (1995) some behaviours are inborn and can be activated by the environment. A child without prenatal disabilities can also acquire developmental problems during foetal stage or during post-natal period through environmental influences such as trauma, accident, nutritional psychosocial etc and live with it. The disabilities observed by the pre-school teachers and the parents expression of the traumatic episodes they experienced while expecting the affected children point to the cause of the identified impairment.

### Establishing disabilities among the pre-school children .

The study in this section was aimed at establishing some of the impairments among the pre-school learners whose developmental problems resulted into various categories of disabilities whose causes are either natural or environmental including trauma (Figure 1.6).

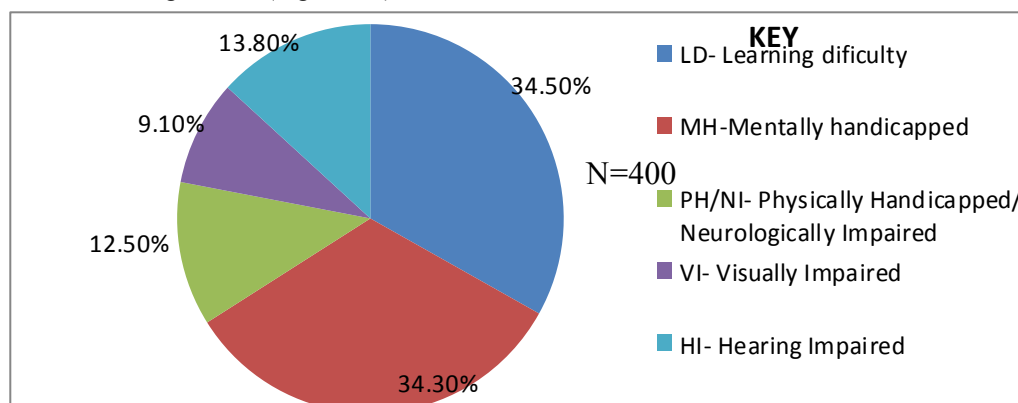


Figure 1.6 : Disabilities among the Pre-School Children in Cheptais, Mt. Elgon Region of Bungoma County

A Chi-square test of deviation conducted on the responses indicated that there was a significant ( $p < 0.01$ ) association of traumatized antenatal mothers with the disabilities of LD, MH, PH/NI, VI, HI ( $\chi^2_{7,0.01} = 63.13$ ). All the cases of disabilities were found in the region 33% were learning difficulties, 28% were mentally handicapped, 12.5% were physically handicapped and neurologically impaired, 9.1% were visually impaired, 9% were hearing

impaired. The disabilities cases were across the Mt. Elgon region with the majority of the S.L.D.F atrocities hence the association of disabilities with the traumatised antenatal mothers. The medical records pin-pointed Cheptais to have many traumatised mothers where many disabled children were found. According to Slatkin, (1998), many children born to cigarette smokers, drunkards have learning difficulties, and hyperactivity tendencies. This justifies that any interference with the foetus can distort its development milestones.

### Learning difficulty

The study further sought to establish the levels of learning difficulty for pre-school children. The results are given in Figure 1.6

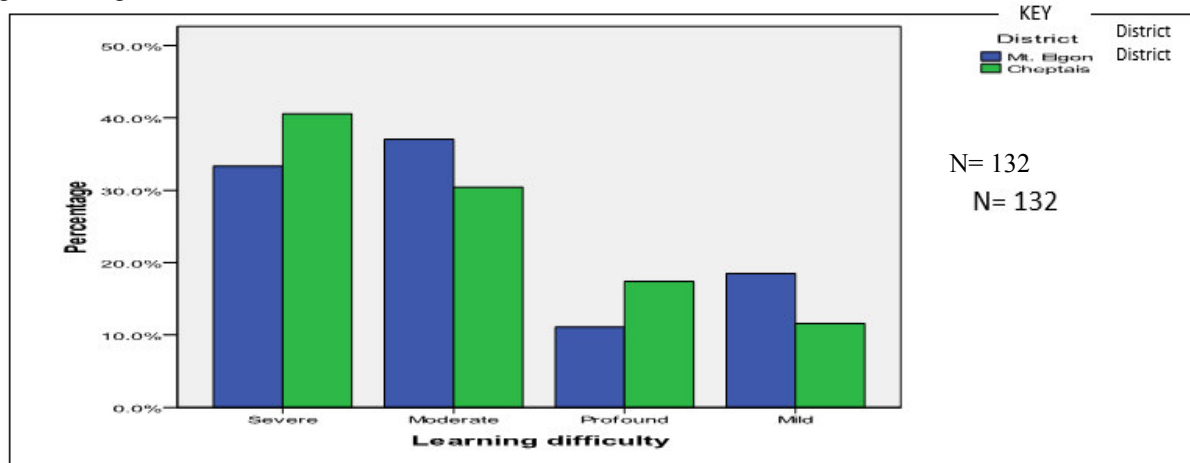


Figure 1.6: Levels of learning difficulty for pre-school children in Mt. Elgon Region, Bungoma County, Kenya

A Chi Square test of independence conducted on the responses indicated that there was no significant ( $p < 0.05$ ) association between having learning difficulty and district of study ( $\chi^2_{2, 0.05} = 0.57$ ). However, most cases of severe learning difficulty were found in Cheptais district as compared to Mt. Elgon district. In Mt. Elgon district, those who had severe learning difficulty were 33.3%, moderate learning difficulty were 37.0%, profound learning difficulty were 11.1 while 18.5% had mild learning difficulty. For Cheptais district, those who had severe learning difficulty were 40.6%, moderate learning difficulty were 30.4%, profound learning difficulty were 17.4% while 11.6% had mild learning difficulty. The epicenter of the land crisis was in Cheptais District. Most of the learners with learning disability came from the district. This revelation cut across all the disabilities identified in the study hence the current status of the children now in pre-school level of education as justified by the pre-school teachers. According to World Health Organization (WHO, 2010) Figure 2.2, the pre-natal cause of learning difficulty are genetics and nutritional imbalance, brain injury during birth and several environmental factors like poor teaching accidents and any exposure to brain can result to trauma. From the FGD meetings, among the problems experienced by the children of the traumatized mothers is poor performance in schools. Majority of who were from Cheptais District. Oatley (1996) suggests that the effects e.g. stress or anxiety later in pregnancy when natural connections are being made in the brain is on behavioural and emotional outcomes. These behavioural and emotional disorders are the major cause of learning disabilities since they interfere with the learning process of a child while the lesson is going on.

### Mentally Handicapped

The study sought to establish the levels of handicap for children who were mentally handicapped. The results are given in Figure 1.7



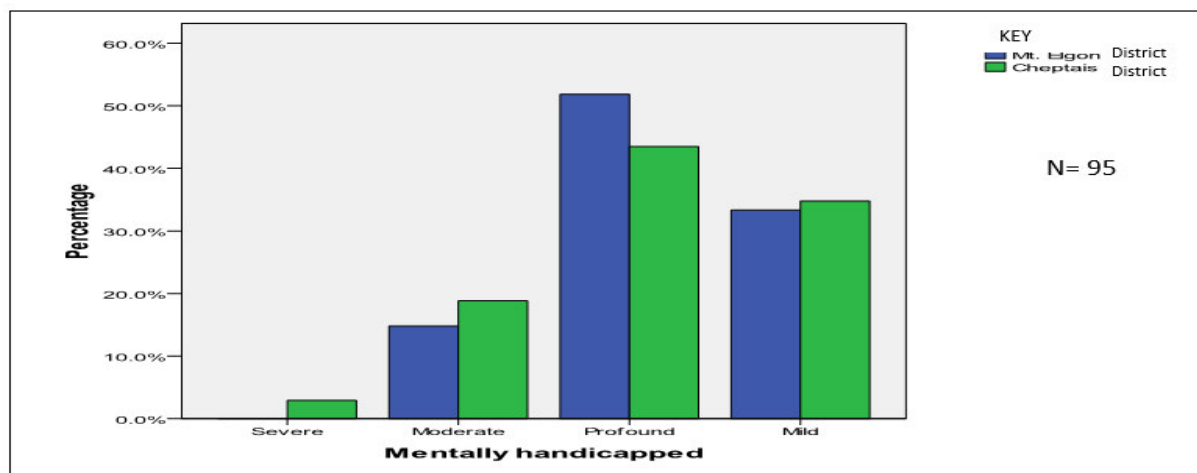


Figure 1.7: Levels of mental handicap for pre-school children in Cheptais, Mt. Elgon Region, Bungoma County, Kenya

A Chi Square test of independence conducted on the responses indicated that there was no significant ( $p < 0.05$ ) association between being mentally handicapped and trauma in Mt. Elgon and Cheptais Districts ( $\chi^2_{3, 0.05} = 4.73$ ). In Mt. Elgon district, none had severe mental handicap, moderately mental handicapped were 14.8%, 51.9% were profound mental handicapped while 33.3% had mild mental handicap. For Cheptais district, those who had severe mental handicap were 2.9%, moderate mental handicap were 18.8%, and 43.5% had profound mental handicap while 34.8% had mild mental handicap. The results show that cases of severe and moderate mental handicap were more in Cheptais than in Mt. Elgon District.

This is confirmed by the attendance of FGD meetings where majority of traumatized mothers who attended were from Cheptais District. The records from the hospitals also indicate that most of the mothers who attended Cheptais District Hospital during 2007-2008 periods were traumatized and expectant mothers as opposed to Kapsokwony District Hospital. The trauma was due to the rape and molestation they faced during the period. The observation during interview by the researcher the mothers and their children also a test to the same from the victims. Rashid, (2005); from the trauma survivors evidence reveals that they are threatened, endangered or frustrated as a way of protecting themselves in a traumatizing environment. All these happen in the brain hence distorting its role in managing the growing foetus leading to poor development of it which can lead to mental disability.

#### Physically Handicapped/ Neurological Impairment

The study sought to establish the effect of trauma in relation to physical or neurological disability. The levels of physical handicap / neurological impairments in the study are summarized in Figure 1.8

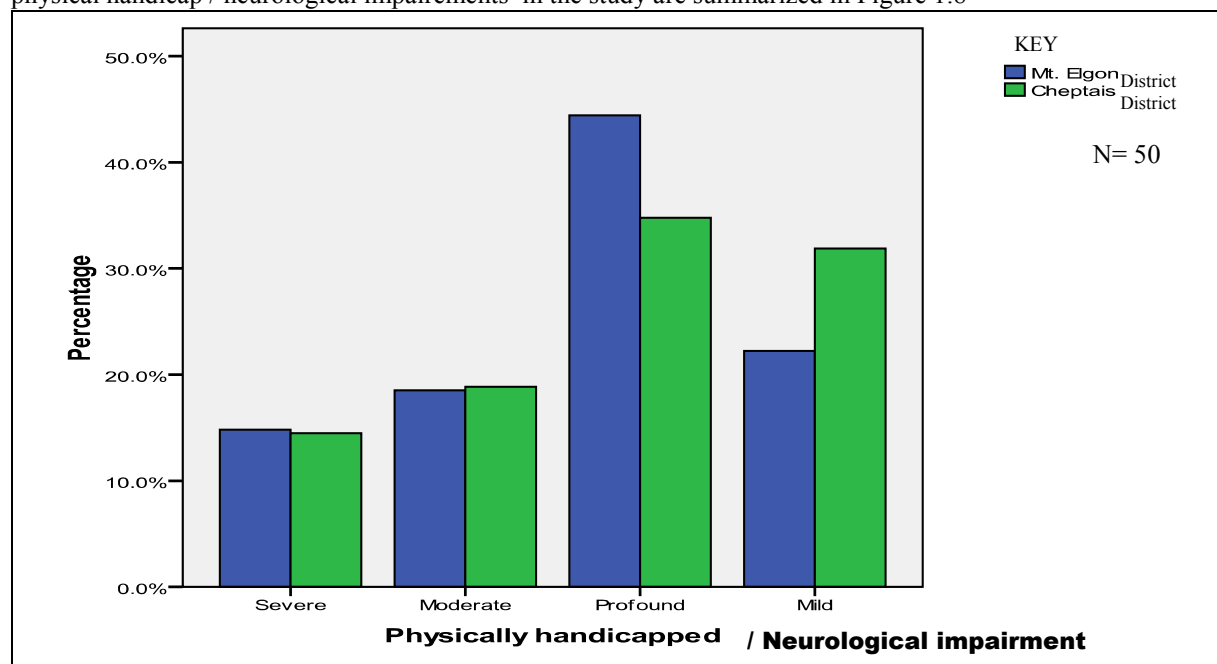


Figure 1.8: Levels of physical handicap for pre-school children in Mt. Elgon Region, Bungoma County, Kenya

A Chi Square test of independence conducted on the responses indicated that there was no significant ( $p>0.05$ ) association between being physically handicapped and district of study ( $\chi^2_{3,0.05}=1.11$ ). In Mt. Elgon district, those who had severe physical handicap were 14.8%, moderate physical handicap were 18.5%, profound physical handicap were 44.4 while 22.2% had mild physical handicap. For Cheptais district, those who had severe physical handicap were 14.5%, moderate physical handicap were 18.8%, profound physical handicap were 34.8 while 31.9% had mild physical handicap. The finding puts Mt. Elgon district with highest number of profoundly physically handicapped at 44.4%. The same applies to Cheptais with 34.8%. Majority of these children were born before 2007-2008 crises. The cause could be due to genetical diseases such as rubella or unknown. Sinclair (1995) does agree with the finding by suggesting that some behaviour are inborn traits and can be activated by the environment. This concurs with the reality of a child being born normal and after few weeks or months he/she starts to develop problems or diseases such as muscular dystrophy, osteogenesis imperfect (brittle bone) scoliosis and muscle cramps etc. The stressful situation also leads to overworking the brain leading to neurological impairments such as cerebral palsy, stroke, and epilepsy.

The observation of the children with physical disability revealed most of them were born with the conditions; which can be associated with genetically influence or hereditary. Therefore trauma of the mothers may not have played any role. The disability did appear in both the children of traumatized mothers and the non-traumatized mothers. This was revealed through the interview schedules with the respondents Erick Erickson (1963); says that some children are irritable and cranky, others fuss and cry; the differences appear so early when pre-natal influences such as mothers' nutritional deficits, drug abuse and pregnancy problems associated with stress appear so early, they have some genetic basis. Hence confirming the influence of genetics on some of the disabilities associated with foetus development in the womb.

#### Visually impaired

The study also aimed at establishing the levels of impairment for children who were visually impaired. The responses are given in Figure 1.9

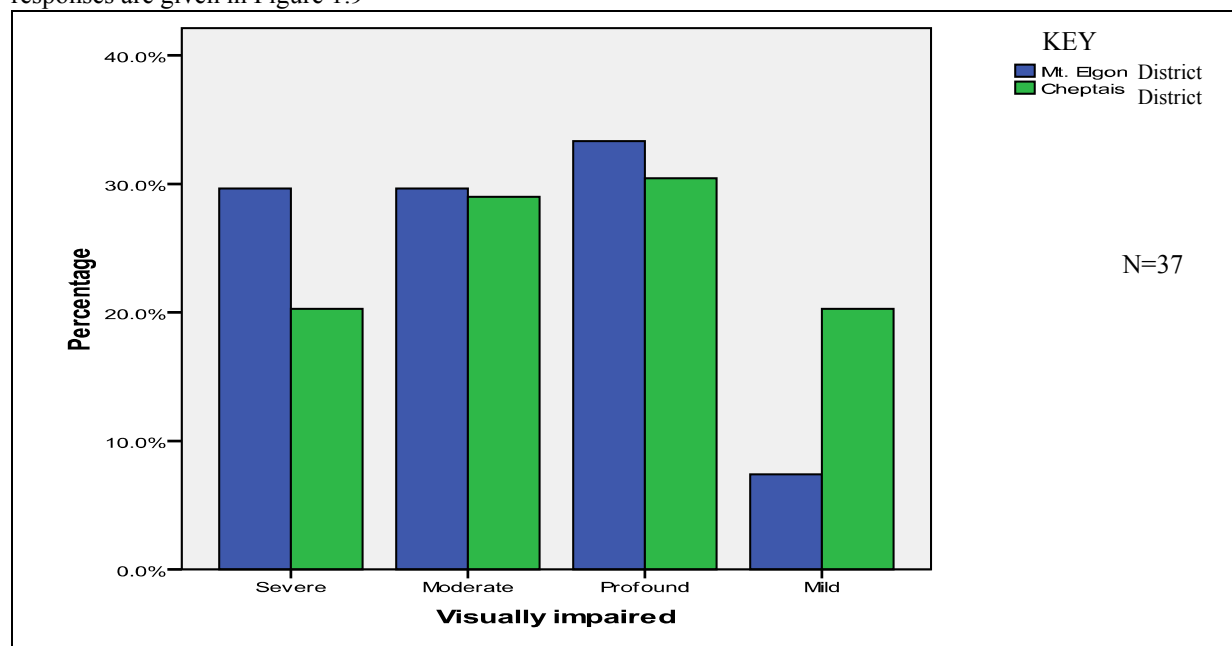


Figure 1.9: Levels of visual impairment for pre-school children in, Mt.Elgon Region, Bungoma County, Kenya.

A Chi Square test of independence conducted on the responses indicated that there was not significant ( $p>0.05$ ) association between visual impairment levels and districts ( $\chi^2_{3,0.05}=0.75$ ). In Mt. Elgon, those who had severe visual impairment were 29.6%, moderate visual impairment were 29.4%, 33.3% had profound visual impairment while 7.4% had mild visual impairment. For Cheptais district, those who had severe visual impairment were 20.3%, moderate visual impairment were 29.0%, 30.4% had profound visual impairment while 20.3% had mild visual impairment.

The results indicate that a greater proportion of those who had severe, moderate and profound visual impairment were from Mt. Elgon region. This could be attributed to other factors in addition to trauma since Mt. Elgon district was not an epicentre of atrocities of S.L.D.F as was Cheptais district. This is justified by the fact that the visual impairment condition was visible equally in the periods before 2007 during 2007-2008 and after 2008 foetus growth who are now children in pre-school in the Mt. Elgon region of Bungoma County. Hultman (2002) concurs by saying that sexually transmitted infections during gestation period cause mental retardation, visual and physical disorders to the new born baby.

## Hearing Impairment

The study sought to establish the proportion of children who had hearing impairment. The responses are given in Figure 1.10

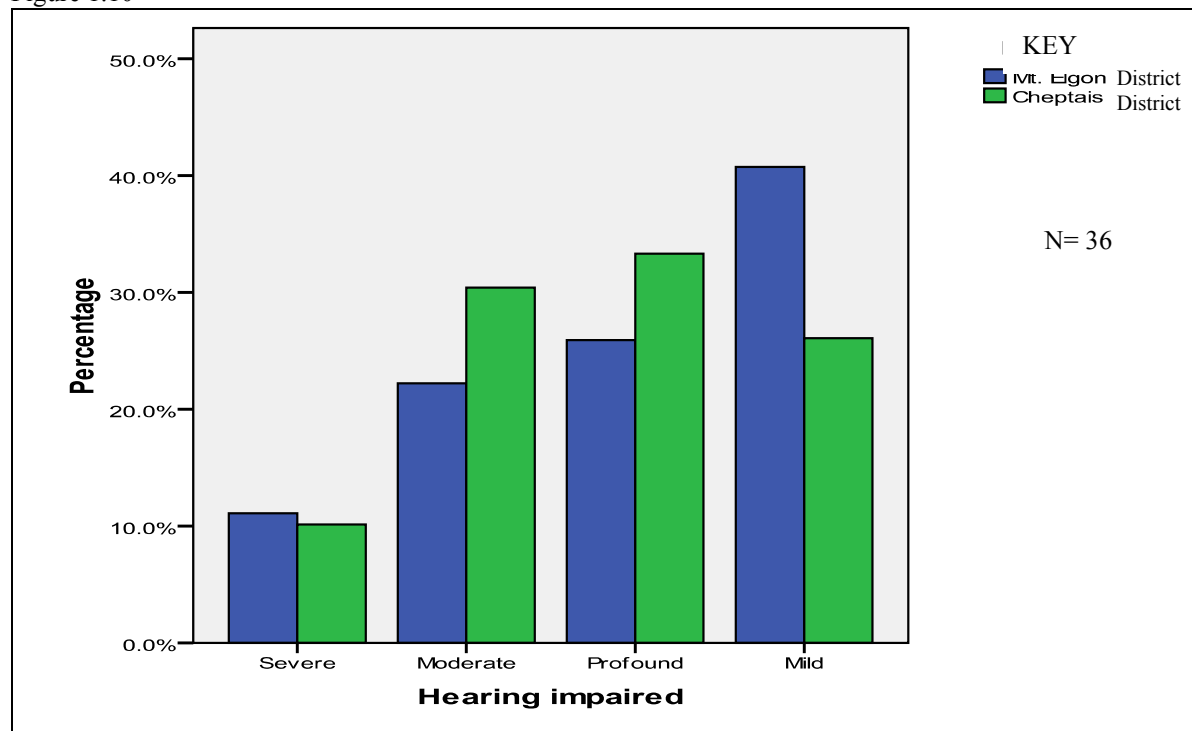


Figure 1.10: Levels of hearing impairment for pre-school children in Mt. Elgon Region, Bungoma County, Kenya

A Chi Square test of independence conducted on the responses indicated that there was no significant ( $p > 0.05$ ) association between hearing impairment and district of study ( $\chi^2_{3,0.05} = 9.95$ ). For Mt. Elgon, those who had severe hearing impairment were 11.1%, while 22.3% had moderate impairment, 25.9% had profound hearing impairment while 40.7% had mild hearing impairment. For Cheptais, those who had severe hearing impairment were 10.2%, 30.4% had moderate impairment, 33.3% had profound hearing impairment while 26.1% had mild hearing impairment. There were more moderate and profound hearing impaired in Cheptais district at 66.7% compared to Mt. Elgon district at 48.2%.

This suggests that the disability may have some bearing on the traumatic effect of the mothers of the children since most of the major divisions affected were from Cheptais district. Carole (2000) justifies the sensitivity of the foetus within the environment of the mother by confirming the reactive response of the foetus from an expectant mother who once complained that whenever her radio played music, she always felt some movements of the foetus in the womb. The implication here is that the hearing system is normally developed by the external stimuli and if denied by conditions caused by trauma, there is likely-hood of poor development of the sense of hearing.

## CONCLUSION

Majority of the children conceived immediately before the civil strife and during the early stages of the strife had developmental problems associated with disabilities. Most of which were related to brain dysfunctioning leading to learning difficulties, mentally handicapped, cerebral, palsy, epilepsy and autism related problems. There were also few disabilities associated with sensory impairments Such as visual, deafblindness.

The children from the non- traumatized mothers had minimal problems. This could be due to other causes like hereditary nutritional or perinatal difficulties. However, some of the behavioural problem of the children born to traumatized mothers could have been acquired during the infant and childhood stages of development from their mothers through imitations and observation as suggested by Lane, (2006).

## RECOMMENDATIONS

To mitigate health and disabilities during antenatal period, the County and National Governments should encourage policies such as: Create awareness of the vulnerability of the expectant mothers to the communities in Kenya. The government should make it a mandatory for expectant mothers to visit hospitals for maternal health care activities. All children joining pre-schools should be made to produce the health care cards as a requirement

for admission.

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